ABSTRACT OF THE INVENTION

There is disclosed, a process for lactonization to produce highly pure simvastatin of Formula I

5

Formula I

which comprises lactonization of a compound of Formula II

Formula II

where Z is H or NH₄ in a mixture of acetonitrile and glacial acetic acid under anhydrous conditions at a temperature of 65-70°C and wherein the dimer impurity of Formula III formed is less than 0.1% and thereafter adding water to the reaction mixture, thereby causing simvastatin of Formula I to precipitate from the reaction mixture.

$$\begin{array}{c} H_{3}C \\ \\ H_{3}C \\ \end{array} \begin{array}{c} CH_{3} \\ \\ \end{array} \begin{array}{c} H_{3}C \\ \end{array} \begin{array}{c} CH_{3} \\ \\ \end{array} \begin{array}{c} H_{3}C \\ \end{array} \begin{array}{c} CH_{3} \\ \\ \end{array} \begin{array}{c} H_{3}C \\ \end{array} \begin{array}{c} CH_{3} \\ \end{array} \begin{array}{c} H \\ \\ \end{array} \begin{array}{c} CH_{3} \\ \end{array} \begin{array}{c} CH_{3} \\ \end{array} \begin{array}{c} H \\ \\ \end{array} \begin{array}{c} CH_{3} \\ \end{array} \begin{array}{c} CH_{3} \\ \end{array} \begin{array}{c} H \\ \\ \end{array} \begin{array}{c} CH_{3} \\ \end{array} \begin{array}{c}$$

Formula III